

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
5 February 2004 (05.02.2004)

PCT

(10) International Publication Number  
**WO 2004/011846 A1**

(51) International Patent Classification<sup>7</sup>: F21S 8/00  
// F21Y 113/02 ..

[DE/DE]; c/o Philips Intellectual Property & Standards  
GmbH, Weisshausstr. 2, 52066 Aachen (DE).

(21) International Application Number:  
PCT/IB2003/002982

(74) Agent: VOLMER, Georg; Philips Intellectual Property &  
Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

(22) International Filing Date: 15 July 2003 (15.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
102 33 768.3 25 July 2002 (25.07.2002) DE

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for DE only*): PHILIPS INTELLECTUAL  
PROPERTY & STANDARDS GMBH [DE/DE]; Stein-  
damm 94, 20099 Hamburg (DE).

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except DE, US*):  
KONINKLIJKE PHILIPS ELECTRONICS N.V.  
[NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven  
(NL).

Published:

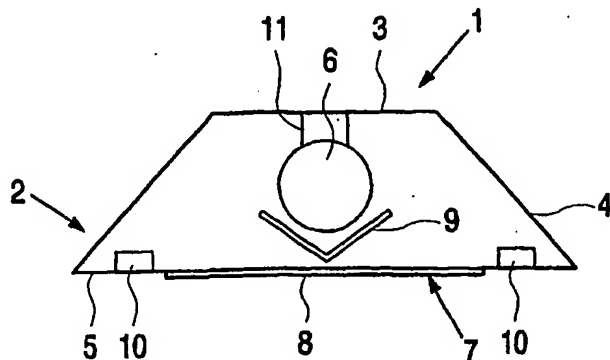
— with international search report

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): SCHOLL, Robert

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: LAMP SYSTEM WITH GREEN-BLUE GAS-DISCHARGE LAMP AND YELLOW-RED LED



(57) Abstract: The invention relates to a lamp  
system having a gas-discharge lamp with a  
color point in the green-blue, an LED with a  
color point in the yellow-red, and an optical  
component for additive mixing of the light  
from the gas-discharge lamp and the LED, and  
to a corresponding method of illumination. A  
blue and green emitting fluorescent lamp is  
particularly suitable as gas-discharge lamp,  
and a red-yellow-emitting AlGaInP LED or a  
red-emitting AlGaAs LED as LED. Through  
additive mixing of the light from these  
high-efficiency light sources, the invention  
provides a highly efficient light source  
affording good color rendering, which contains  
all three primary colors and is particularly  
suited to the highly efficient generation of  
white light.

WO 2004/011846 A1